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PTO/SB/08A (08-00)

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/730,067	
			Filing Date	December 9, 2003	
			First Named Inventor	Louis B. ROSENBERG	
			Group Art Unit	2674	
			Examiner Name		
Sheet	1	of	3	Attorney Docket Number	IMMR-067/04US

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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
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	A6	5,309,140		Everett, Jr., et al.	05/03/1994
	A7	5,299,810		Pierce et al.	04/05/1994
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	A11	5,212,473		Louis	05/18/1993
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¹ Unique citation designation number.

² See attached Kinds of U.S. Patent Documents.

Examiner: XIAO WU

Date 9-3-05

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			Group Art Unit	2674	
Examiner Name					
Sheet	2	of	3	Attorney Docket Number	IMMR-067/04US

<input checked="" type="checkbox"/>	A33	3,497,668		Hirsch	02/24/1970
<input checked="" type="checkbox"/>	A34	3,220,121		Cutler	11/30/1965
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Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Office ¹	Number ²	Kind Code ³ (if known)		
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
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	C1	Raigrie, "Electric Control Loading - A Low Cost, High Performance Alternative," <i>Proceedings of Interservice/Industry Training Systems Conference</i> , pp. 247-254, November 6-8, 1990		
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¹ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

² For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

³ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

⁴ Applicant is to place a check mark here if English language Translation is attached.

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			Group Art Unit	2674	
Examiner Name					
Sheet	3	of	3	Attorney Docket Number	IMMR-067/04US



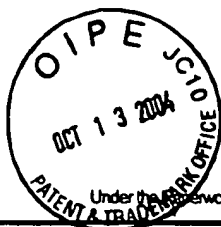
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

192254 v1/RE
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¹ Unique citation designation number.

² Applicant is to place a check mark here if English language Translation attached.



(1 of 2)

PTO/SB/08A (10-01)

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for Form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 3

Complete if Known

Application Number	10/730,067
Filing Date	December 9, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2674
Examiner Name	Unassigned
Attorney Docket Number	IMMR067/04US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
		JP	H2-185278		7/19/1990	Taito Corporation	
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		JP	H2-24147		1/27/1996	Sega Corporation	
		JP	H5-182449		8/3/1993	Taito Corporation	

Examiner
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Xiao Wu

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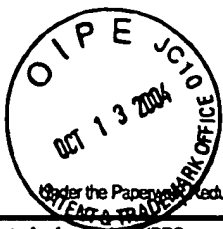
OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
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Examiner Signature	X/140 Wu	Date Considered	9-3-05
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Examiner
Signature

XIAO Wu

Date
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Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/730,067
		Filing Date	December 9, 2003
		First Named Inventor	Louis B. Rosenberg
		Art Unit	2674
		Examiner Name	Unassigned
Sheet 2 of 11	Attorney Docket Number	IMMR067/04US	

U.S. PATENT DOCUMENTS					
Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
X		4,769,763	09-1988	Trieb et al.	
		4,787,051	11-1988	Olson	
		4,791,934	12-1988	Brunnett	
		4,798,919	01-1989	Miessler et al.	
		4,800,721	01-1989	Cemenska et al.	
		4,803,413	02-1989	Kendig et al.	
		4,811,608	03-1989	Hilton	
		4,819,195	04-1989	Bell et al.	
		4,839,838	06-1989	LaBiche et al.	
		4,849,692	07-1989	Blood	
		4,879,556	11-1989	Duimel	
		4,888,877	12-1989	Enderle et al.	
		4,891,889	01-1990	Tomelleri	
		4,907,970	03-1990	Meenen, Jr.	
		4,907,973	03-1990	Hon	
		4,942,545	07-1990	Sapla	
		4,945,305	07-1990	Blood	
		4,945,501	07-1990	Bell et al.	
		4,949,119	08-1990	Moncrief et al.	
		4,961,138	10-1990	Gorniak	
		4,961,267	10-1990	Herzog	
		4,962,591	10-1990	Zeller et al.	
		4,982,504	01-1991	Soderberg et al.	
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		5,007,085	04-1991	Greanias et al.	
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		5,012,231	04-1991	Felsenstein	
		5,040,306	08-1991	McMurtry et al.	
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		5,088,055	02-1992	Oyama	
		5,095,303	03-1992	Clark et al.	
		5,103,404	04-1992	McIntosh	

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**INFORMATION DISCLOSURE
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Sheet **3** of **11****Complete if Known**

Application Number	10/730,067
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First Named Inventor	Louis B. Rosenberg
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		Number Kind Code ² (if known)			
Xm		5,107,080	04-1992	Rosen	
		5,116,051	05-1992	Moncrief et al.	
		5,126,948	06-1992	Mitchell et al.	
		5,128,671	07-1992	Thomas, Jr.	
		5,131,844	07-1992	Marinaccio et al.	
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		5,139,261	08-1992	Openiano	
		5,142,506	08-1992	Edwards	
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		5,143,505	09-1992	Burdea et al.	
		5,148,377	09-1992	McDonald	
		5,153,884	10-1992	Lucak et al.	
		5,178,012	01-1993	Culp	
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		5,182,557	01-1993	Lang	
		5,184,306	02-1993	Erdman et al.	
		5,184,319	02-1993	Kramer	
		5,185,561	02-1993	Good et al.	
		5,186,629	02-1993	Rohen	
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		5,203,563	04-1993	Loper, III	
		5,204,824	04-1993	Fujimaki	
		5,209,131	05-1993	Baxter	
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		5,230,623	07-1993	Guthrie et al.	
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		5,251,127	10-1993	Raab	
		5,251,156	10-1993	Heier et al.	
		5,259,120	11-1993	Chapman et al.	
Xm		5,259,894	11-1993	Sampson	
		5,262,777	11-1993	Low et al.	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet **4** of **11****Complete if Known**

Application Number	10/730,067
Filing Date	December 9, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2674
Examiner Name	Unassigned
Attorney Docket Number	IMMR067/04US

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		Number Kind Code ² (if known)			
Xm		5,264,768	11-1993	Gregory et al.	
		5,275,565	01-1994	Moncrief	
		5,289,273	02-1994	Lang	
		5,296,846	03-1994	Ledley	
		5,296,871	03-1994	Paley	
		5,351,692	10-1994	Dow et al.	
		5,354,162	10-1994	Burdea et al.	
		5,379,663	01-1995	Hara	
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		5,389,865	02-1995	Jacobus et al.	
		5,396,266	03-1995	Brimhall	
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		5,397,323	03-1995	Taylor et al.	
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		5,445,166	08-1995	Taylor	
		5,451,924	09-1995	Massimino et al.	
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		5,467,763	11-1995	McMahon et al.	
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		5,513,100	04-1996	Parker et al.	
		5,517,507	05-1996	Needham et al.	
		5,551,701	09-1996	Bouton et al.	
		5,570,111	10-1996	Barrett et al.	
		5,576,727	11-1996	Rosenberg et al.	
		5,587,937	12-1996	Massle et al.	
Xm		5,589,828	12-1996	Armstrong	

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Sheet **5** of **11****Complete if Known**

Application Number	10/730,067
Filing Date	December 9, 2003
First Named Inventor	Louis B. Rosenberg
Art Unit	2674
Examiner Name	Unassigned
Attorney Docket Number	IMMR067/04US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
Xm		5,589,854	12-1996	Tsai	
		5,591,924	01-1997	Hilton	
		5,623,582	04-1997	Rosenberg	
		5,625,576	04-1997	Massie et al.	
		5,629,594	05-1997	Jacobus et al.	
		5,634,794	06-1997	Hildreth et al.	
		5,642,469	06-1997	Hannaford et al.	
		5,643,087	07-1997	Marcus et al.	
		5,656,901	08-1997	Kurtla	
		5,666,473	09-1997	Wallace	
		5,680,322	10-1997	Shinoda	
		5,691,898	11-1997	Rosenberg et al.	
		5,694,013	12-1997	Stewart et al.	
		5,696,535	12-1997	Rutledge et al.	
		5,709,219	01-1998	Chen et al.	
		5,721,566	02-1998	Rosenberg et al.	
		5,731,804	03-1998	Rosenberg	
		5,734,373	03-1998	Rosenberg et al.	
		5,739,811	04-1998	Rosenberg et al.	
		5,742,278	04-1998	Chen et al.	
		5,755,577	05-1998	Gillio	
		5,767,839	06-1998	Rosenberg	
		5,790,108	08-1998	Salcudean et al.	
		5,802,353	09-1998	Avila et al.	
		5,889,670	03-1999	Schuler et al.	
		5,897,437	04-1999	Nishiumi et al.	
Xm		6,278,439	08-2001	Rosenberg et al.	

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
		JP	4-34610				
		GB	2254044				
		WO	9502801				
		WO	9542078				
		EP	0626634	A2			

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Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/730,067
		Filing Date	December 9, 2003
		First Named Inventor	Louis B. Rosenberg
		Art Unit	2674
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Sheet 6 of 11	Attorney Docket Number	IMMR067/04US	

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
		WO	9532459				
		WO	9712357				
		WO	9720309				
		WO	9721160				
		WO	9731333				

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Sheet	7	of	11

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		Cursor Walso, "Designer's Corner Useful Technology for Your Idea File," Design News, Mar. 7, 1993, p. 63.	
		"Foot-Operated Mouse," IBM Technical Disclosure Bulletin, Apr. 1986, vol. 28, No. 11.	
		"High Performance Model of the Immersion Probe," Immersion Probe-MD.TM., Immersion Human Interface Corporation.	
		"High Performance Model of the Immersion Probe." Immersion Probe-MD.TM., Immersion Corporation (1994).	
		"Proceedings of the IFIP Congress 65," International Federation for Information Processing, Information Processing 1965, vol. 3, New York, May 24-29, 1965, pp. 506	
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		3D Human Interface Tool, Immersion Probe.TM., Immersion Human Interface Corporation 1994.	
		Adachi, Yoshitaka et al., "Sensory Evaluation of Virtual Haptic Push-Buttons," Technical Research Center, Suzuki Motor Corporation, Nov. 1994.	
		Adelstein Bernard D. et al., "A High Performance Two Degree-of-Freedom Kinesthetic Interface," Massachusetts Institute of Technology 1992, pp. 108-112	
		Atkinson, William D. et al., "Computing with Feeling," Comput. & Graphics, vol. 2, No. 2-6, pp. 97-103.	
		Balter, James J. et al., "Gripe 1: A Computer Display to the Sense of Feel," pp. TA-4-188-TA-4-192.	
		Bejczy, Antal K., "The Phantom Robot: Predictive Displays for Teleoperation with Time Delay," IEEE 1990, pp. 546-550.	
		Burdea, Grigore et al., "A Portable Dextrous Master with Force Feedback," Presence: Teleoperators and Virtual Environments, MIT Press, Jun. 1991.	
		Burdea, Grigore et al., "Dextrous Telerobotics with Force Feedback: An Overview," Robotica 1991, vol. 9.	

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Sheet 8 of 11

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		Buttolo, Pietro et al., "Pen-Based Force Display for Precision Manipulation in Virtual Environments," IEEE Mar. 1995, pp. 1-8.
		Colgate J. Edward et al., Implementation of Stiff Virtual Walls in Force-Reflecting Interfaces, Sep. 22, 1993.
		Ellis, R.E. et al., "Design and Evaluation of a High-Performance Prototype Planar Haptic Interface," ASME Dec. 3, 1993, DSC vol. 49, pp. 55-64.
		Fischer, Patrick et al., "Specification and Design of Input Devices for Teleoperation," 1990.
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		Gotow, J.K., et al., "Preception of Mechanical Properties at the Man-Machine Interface," IEEE 1987, pp. 688-689.
		Hannaford, Blake et al., "Performance Evaluation of a Six-Axis Generalized Force-Reflecting Teleoperator," IEEE May/Jun. 1991, vol. 21, No. 3, pp. 620-633.
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		Herndon, J.N. et al., "The State-of-the-Art Model M-2 Maintenance System," Proceedings of the 1984 National Topical Meeting on Robotics and Remote Handling in Hostile Environments, American Nuclear Society, pp. 59-65.
		Howe, Robert D., "Task Performance with a Dextrous Teleoperated Hand System," Proceedings of SPIE, Nov. 1992, vol. 1833, pp. 1-9.
		Iwata, H., "Artificial Reality with Force Feedback: Development of Desktop Virtual Space with Compact Master Manipulator," Computer Graphics, vol. 24, No. 4, 1990, pp. 165-170.
		Iwata, Hiroo et al., Volume Haptization, IEEE 1993, pp. 16-18.
		Jacobsen, S.C. et al., "High Performance, High-Dexterity, Force Reflective Teleoperator II," ANS Topical Meeting on Robotics & Remote Systems, Albuquerque, New Mexico Feb. 24-27, 1991, pp. 1-10.
		Kelley, A.I. et al., "MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface Using an Electromagnetically Actuated Input/Output Device," Dept. of Elec. Engineering, Univ. of British Columbia, 1993, pp. 1-27.

Examiner Signature	XIAO WU	Date Considered	9-3-05
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		Art Unit	2674
		Examiner Name	Unassigned
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		Kilpatrick, Paul Jerome, 1947, "The Use of a Kinesthetic Supplement in an Interactive Graphics System", Xerox University Microfilms, Ann Arbor, Michigan 48106, 1976, pp. 1-175.	
		Kim, Won S. et al., "Graphics Displays for Operator Aid in Telem Manipulation," IEEE 1991, pp. 1059-1067.	
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Examiner Signature	XIAO WU	Date Considered	9-3-03
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Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/730,067
		Filing Date	December 9, 2003
		First Named Inventor	Louis B. Rosenberg
		Art Unit	2674
		Examiner Name	Unassigned
Sheet 10 of 11	Attorney Docket Number	IMMR067/04US	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		Rosenberg, L.B., "Commercially Viable Force Feedback Controller for Individuals with Neuromotor Disabilities", AT/CF-TR-1997-0016, United States Air Force Armstrong Laboratory, May 1996.	
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Sheet 11 of 11

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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		Tavkhelidze, D.S. "Kinematic Analysis of Five-Link Spherical Mechanisms," Mechanism and Machine Theory 1974, vol. 9, pp. 181-190.
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